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Karuppiyah Kandasamy Ettikan

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Daly, Crowley & Mofford, LLP
c/o PortfoliolP
P.O. Box 52050
Minneapolis, MN 55402

EXAMINER

MADAMBA, GLENFORD J

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/749,333	Applicant(s) ETTIKAN, KARUPPIAH KANDASAMY	
	Examiner Glenford Madamba	Art Unit 2451	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/04, 7/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter such as 'data structures' only. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. Applicant is thus advised to take necessary action and/or make appropriate corrections with respect to the claims.

3. Claims 22-32 are similarly rejected under 35 U.S.C. 101 because the claimed invention is also directed to non-statutory subject matter. The claims recite a "computer readable medium" that is not tangibly embodied in a computer storage medium /device

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(i.e., "computer readable medium can also include optical and/or wireless signals), which is required in order for the claims to be considered statutory. Applicant is thus advised to take necessary action and/or make appropriate corrections with respect to the claims

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-12, 19, 22, 23 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Non-Patent Literature (NPL) Hinden, RFC 2373.

As per Claims 1 and 6, Hinden, RFC 2373 discloses a network address, comprising:

prefix bits encoded to identify the network address as a selected one of a unicast network address, an anycast network address, and both the unicast and the anycast network address (IPv6 addressing for Unicast and/or Anycast) [pg. 2, section 2.0] (e.g., Format Prefix "FP" {3-bit}) [pg. 8, section 2.5.7];

anycast scope identifier bits to identify an anycast scope, wherein the anycast scope corresponds to a network scope within which the anycast network address is recognized (e.g. Scope ID) [pg. 11, section 2.6.1]; and

anycast group identifier bits to identify an anycast group having one or more anycast members, wherein each of the one or more anycast members is associated with the same anycast network address (e.g. Group ID) [pg. 11, section 2.6.1].

Claims 6 and 11 recite the same limitations as claim 1, are distinguished only by their statutory category, and thus rejected on the same basis.

As per Claims 2, 7, 12, 19, 23 and 30, Hinden, RFC 2373 discloses the network address of claim 1, wherein the prefix bits include at least two prefix bits as the three most significant bits of the network address (e.g., Format Prefix "FP" {3-bit}) [pg. 8, section 2.5.7], and the anycast group identifier bits include at least thirty-two bits as the least significant bits of the network address (e.g. Group ID) [pg. 11, section 2.6.1].

Claims 7, 12, 19, 23 and 30 recite the same limitations as claim 1, are distinguished only by their statutory category, and thus rejected on the same basis.

As per Claims 3 and 8, Hinden, RFC 2373 discloses the network address of claim 1, wherein the anycast scope bits include at least two bits adapted to identify a selected one of a node local scope, a link local scope, a site local scope, and a global scope (e.g. 4-bit node, link, site and global scope) [pg. 11, section 2.6.1].

Claim 8 recites the same limitations as claim 3, is distinguished only by its statutory category, and thus rejected on the same basis.

As per Claims 4 and 9, Hinden, RFC 2373 discloses the network address of claim 1, wherein the network address has a network address length of one hundred twenty eight bits, and the network address is compatible with Internet protocol version six (IPv6) (e.g., 128 bit node address) [pg. 6, section 2.5].

Claim 9 recites the same limitations as claim 4, is distinguished only by its statutory category, and thus rejected on the same basis.

As per Claims 5 and 10, Hinden, RFC 2373 discloses the network address of claim 4, wherein top level aggregation identifier, next-level aggregation identifier, and site-level aggregation identifier portions of the one hundred twenty eight network address bits are at the same bit locations and have the same function for both the anycast network address and for the unicast network address .

Claim 10 recites the same limitations as claim 5, is distinguished only by its statutory category, and thus rejected on the same basis.

As per Claims 11 and 22, Hinden, RFC 2373 discloses a method of routing a network packet having a network address, comprising: receiving the network packet; and decoding prefix bits associated with the network address to identify the network address as being a selected one of a unicast network address and an anycast network address.

Claims 11 and 22 recite the same limitations as claim 1, are distinguished only by their statutory category, and thus rejected on the same basis.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13-21, 24-29, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Non-Patent Literature (NPL) Hinden, RFC 2373 in view of Garcia-Luna- Aceves (hereinafter Garcia), U.S. Patent Publication US 2002/0016860 A1.

As per Claims 13 and 24, while Hinden discloses substantial features of the invention such as the network address of claim 1, and in particular a network address for a selected one of an anycast address, a unicast address, or both a unicast/anycast address; he does not expressly disclose the additional features of the method comprising performing lookups associated with the network address in one or more routing tables; identifying an output port from the successive lookups; sending, if the output port is identified and if the network address is the unicast network address, the

network packet to the identified output port; and sending, if the output port is identified and if the network address is the anycast network address, the network packet to the identified output port. The features are disclosed by Garcia in a related endeavor.

Garcia discloses as his invention an information object repository configured to resolve a network layer anycast address to a network layer unicast address in response to a request for an information object at the network layer anycast address [Abstract]. Specifically, Garcia discloses the additional features of the method comprising performing lookups associated with the network address in one or more routing tables ('routing tables') [0100]; identifying an output port from the successive lookups (e.g., closest host according to routing table entry) [0100]; sending, if the output port is identified and if the network address is the unicast network address, the network packet to the identified output port (unicast IP address 506) [0106]; and sending, if the output port is identified and if the network address is the anycast network address, the network packet to the identified output port (anycast IP address) [0105].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to combine and/or modify Hinden's invention with the above added feature, as disclosed by Garcia, for the motivation of providing a method and system involving a request for an information object that takes into consideration not only the actual storage location of the object requested, but also 'specified performance metrics' of the source node [0047].

Claim 24 recites the same limitations as claim 13, is distinguished only by its statutory category, and thus rejected on the same basis.

As per Claims 14 and 25, while Hinden discloses substantial features of the invention such as the network address of claim 1, and in particular a network address for a selected one of an anycast address, a unicast address, or both a unicast/anycast address; he does not expressly disclose the additional features of the method comprising examining port metrics associated with the more than one output port; identifying one output port from among the more than one output port based upon the metrics; and sending the network packet to the identified output port. The feature are disclosed by Garcia in a related endeavor.

Garcia discloses as his invention an information object repository configured to resolve a network layer anycast address to a network layer unicast address in response to a request for an information object at the network layer anycast address [Abstract]. Specifically, Garcia discloses the additional feature of the method comprising examining port metrics associated with the more than one output port; identifying one output port from among the more than one output port based upon the metrics; and sending the network packet to the identified output port (e.g., 'specified performance metrics') [0047-0050].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to combineb and/or modify Hinden's invention with the above added feature,

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as disclosed by Garcia, for the motivation of providing a method and system involving a request for an information object that takes into consideration not only the actual storage location of the object requested, but also 'specified performance metrics' of the source node [0047].

Claim 25 recites the same limitations as claim 14, is distinguished only by its statutory category, and thus rejected on the same basis.

As per Claims 15, 20, 26, and 31, while Hinden discloses substantial features of the invention such as the network address of claim 1, and in particular a network address for a selected one of an anycast address, a unicast address, or both a unicast/anycast address; he does not expressly disclose the additional feature of the method including *one or more routing tables* associated with sixteen most significant bits of the network address. The feature is disclosed by Garcia in a related endeavor.

Garcia discloses as his invention an information object repository configured to resolve a network layer anycast address to a network layer unicast address in response to a request for an information object at the network layer anycast address [Abstract]. Specifically, Garcia discloses the additional feature of the method including one or more routing tables associated with sixteen most significant bits of the network address ('routing table') [0100].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to combine and/or modify Hinden's invention with the above added feature,

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as disclosed by Garcia, for the motivation of providing a method and system involving a request for an information object that takes into consideration not only the actual storage location of the object requested, but also 'specified performance metrics' of the source node [0047].

Claim 20, 26, and 31 recite the same limitations as claim 15, are distinguished only by their statutory category, and thus rejected on the same basis.

As per Claims 16, 21, 27 and 32, while Hinden discloses substantial features of the invention such as the network address of claim 1, and in particular a network address for a selected one of an anycast address, a unicast address, or both a unicast/anycast address; he does not expressly disclose the additional feature of the method including *one or more routing tables* associated with sixteen most significant bits and other ones of the one or more routing tables are associated with respective groups of eight bits of the network address. The feature is disclosed by Garcia in a related endeavor.

Garcia discloses as his invention an information object repository configured to resolve a network layer anycast address to a network layer unicast address in response to a request for an information object at the network layer anycast address [Abstract]. Specifically, Garcia discloses the additional feature of the method including one or more routing tables associated with sixteen most significant bits and other ones of the one or more routing tables are associated with respective groups of eight bits of the network address ('routing table') [0100].

It would thus be obvious to one of ordinary skill in the art at the time of the invention to combine and/or modify Hinden's invention with the above added feature, as disclosed by Garcia, for the motivation of providing a method and system involving a request for an information object that takes into consideration not only the actual storage location of the object requested, but also 'specified performance metrics' of the source node [0047].

Claims 21, 27 and 32 recite the same limitations as claim 16, are distinguished only by their statutory category, and thus rejected on the same basis.

As per Claims 17 and 28, Hinden discloses substantial features of the invention such as the network address of claim 1, and in particular a network address for a selected one of an anycast address, a unicast address, or both a unicast/anycast address. Hinden also expressly discloses a method of generating a routing table associated with a network packet having a network address comprising receiving the network packet; decoding prefix bits associated with the network address to identify the network address as being a selected one of a unicast network address and an anycast network address (IPv6 addressing for Unicast and/or Anycast) [pg. 2, section 2.0] (e.g., Format Prefix "FP" {3-bit}) [pg. 8, section 2.5.7].

However, he does not expressly disclose the additional features of the method including performing lookups associated with selected ones of the bits of the network address in one or more routing tables to identify a matching route stored in the one or

more routing tables, and *changing*, if the matching route is identified and if the matching route corresponds to the unicast (alternatively anycast) network address and if the network address is the anycast (alternatively unicast) network address, *the prefix bits associated with the matching route stored in the one or more routing tables* to indicate that the matching route corresponds to both the unicast network address and the anycast network address. The features are disclosed by Garcia in a related endeavor.

Garcia discloses as his invention an information object repository configured to resolve a network layer anycast address to a network layer unicast address in response to a request for an information object at the network layer anycast address [Abstract]. Specifically, Garcia discloses the additional feature of the method including performing lookups associated with selected ones of the bits of the network address in one or more routing tables to identify a matching route stored in the one or more routing tables ('lookup tables') [0106], and *changing*, if the matching route is identified and if the matching route corresponds to the unicast (alternatively anycast) network address and if the network address is the anycast (alternatively unicast) network address, *the prefix bits associated with the matching route stored in the one or more routing tables* to indicate that the matching route corresponds to both the unicast network address and the anycast network address (updating of routing tables for a group of hosts [0100] [0105-0106]).

It would thus be obvious to one of ordinary skill in the art at the time of the invention to combine and/or modify Hinden's invention with the above added feature, as disclosed by Garcia, for the motivation of providing a method and system involving a

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request for an information object that takes into consideration not only the actual storage location of the object requested, but also 'specified performance metrics' of the source node [0047].

Claim 28 recites the same limitations as claim 17, is distinguished only by its statutory category, and thus rejected on the same basis.

As per Claims 18 and 29, Hinden RFC 2373 discloses the method of claim 17, wherein the selected ones of the bits of the network address correspond to sixty-one bits (e.g., 64 bits for exemplary Aggregatable Global Unicast Address) [pg. 8, section 2.5.7].

Claim 29 recites the same limitations as claim 18, is distinguished only by its statutory category, and thus rejected on the same basis.

Conclusion

1. The Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

- Hameleers et al Patent Pub No.: US 2005/0044141 A1
- HInden NPL: RFC 2374

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Glenford Madamba
Examiner
Art Unit 2451

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/John Follansbee/

Supervisory Patent Examiner, Art Unit 2451